

Check Valves

CV1-CV6 Series



Check Valves

CV1 Series



- ❖ Working pressures up to 3000 psig (206 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ Cracking pressure from 1/3 to 25 psig (0.02 to 1.7 bar)
- ❖ Variety of end connections
- ❖ Variety of body materials and seal materials

Features

- ❖ Maximum working pressure: 3000 psig (206 bar)
- ❖ Working temperature: -10°F to 400°F (-23°C to 204°C)
- ❖ Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- ❖ Variety of end connections and materials available

Cracking Pressure

Series	Nominal Cracking Pressure psig (bar)	Cracking Pressure Range psig (bar)
CV1	1/3 (0.02)	0 to 3 (0 to 0.21)
	1 (0.06)	0 to 4 (0 to 0.28)
	3 (0.21)	1 to 5 (0.06 to 0.34)
	10 (0.68)	7 to 15 (0.49 to 1.1)
	25 (1.7)	20 to 30 (1.4 to 2.1)

Pressure-Temperature Ratings

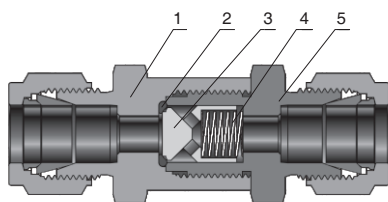
Ratings based on fluorocarbon FKM O-rings in 316 stainless steel valves and Buna N O-rings in brass valves.

Material	316 S.S.	Brass
Temperature, °F (°C)	Working Pressure, psig (bar)	
-10 (-23) to 100 (37)	3000 (206)	3000 (206)
200 (93)	2575 (177)	2600 (179)
250 (121)	2450 (168)	2405 (165)
300 (148)	2325 (160)	—
400 (204)	2185 (150)	—

Seal Materials

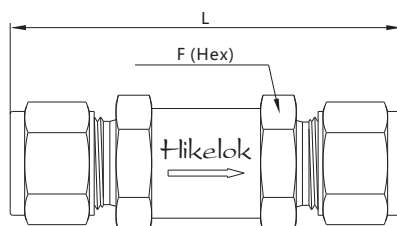
Seal Material	Temperature Range °F (°C)
Buna N	-10 to 250 (-23 to 121)
Ethylene propylene	-50 to 300 (-45 to 148)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Neoprene	-40 to 250 (-40 to 121)

Standard Materials of Construction



Component		Valve Material Grade/ASTM Specification	
		316 S.S.	Brass
1	Inlet Body	316 S.S./A479	Brass 360/B16
2	O-ring	Fluorocarbon FKM	Buna N
3	Poppet	316 S.S./A479	Brass 360/B16
4	Spring	302 S.S./A313	302 SS/A313
5	Outlet Body	316 S.S./A479	Brass 360/B16

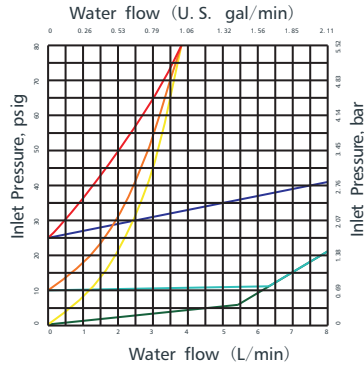
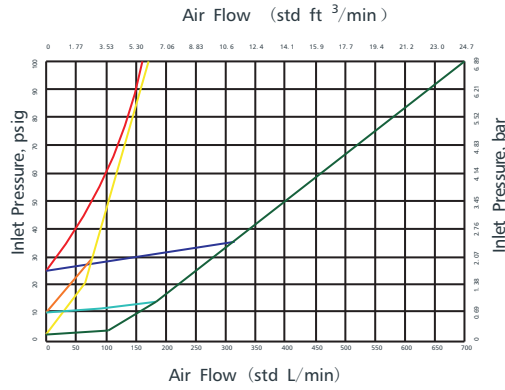
Dimensions



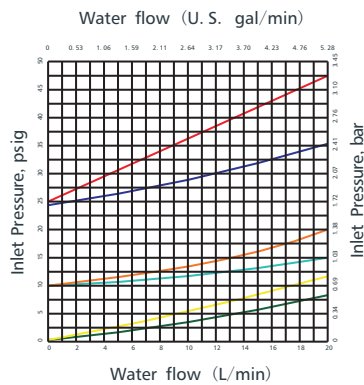
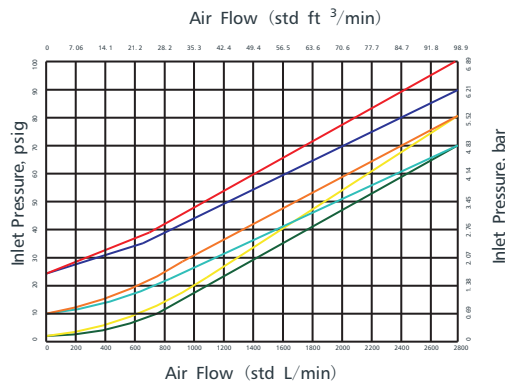
Basic Ordering Number	Connection Type and Size	CV	Dimension, in. (mm)	
			L	F
CV1-F2-	1/8" Hikelok	0.16	2.14 (54.3)	5/8 (15.88)
CV1-F4-	1/4" Hikelok	0.47	2.35 (59.7)	
CV1-F6-	3/8" Hikelok	1.47	3.17 (80.5)	7/8 (22.23)
CV1-F8-	1/2" Hikelok	1.68	3.42 (86.9)	
CV1-F12-	3/4" Hikelok	4.48	4.32 (110)	1 1/4 (31.75)
CV1-F16-	1" Hikelok		4.74 (120)	1 3/8 (34.93)
CV1-M6-	6 mm Hikelok	0.47	2.36 (59.9)	5/8 (15.88)
CV1-M10-	10 mm Hikelok	1.68	3.32 (84.3)	7/8 (22.23)
CV1-M12-	12 mm Hikelok		3.42 (86.9)	
CV1-FNPT2-	1/8 Female NPT	0.16	1.89 (48.0)	5/8 (15.88)
CV1-FNPT4-	1/4 Female NPT	0.47	2.15 (54.6)	3/4 (19.05)
CV1-FNPT6-	3/8 Female NPT	1.47	2.98 (75.7)	7/8 (22.23)
CV1-FNPT8-	1/2 Female NPT	1.68	3.58 (90.9)	1 1/16 (26.99)
CV1-FNPT12-	3/4 Female NPT	4.48	4.08 (104)	1 1/4 (31.75)
CV1-FNPT16-	1 Female NPT		4.84 (123)	1 5/8 (41.28)
CV1-NPT2-	1/8 Male NPT	0.16	1.71 (43.4)	5/8 (15.88)
CV1-NPT4-	1/4 Male NPT	0.47	2.09 (53.1)	
CV1-NPT6-	3/8 Male NPT	1.47	2.78 (70.6)	7/8 (22.23)
CV1-NPT8-	1/2 Male NPT	1.68	3.16 (80.3)	
CV1-NPT12-	3/4 Male NPT	4.48	4.08 (104)	1 1/4 (31.75)
CV1-NPT16-	1 Male NPT		4.52 (115)	1 5/8 (41.28)

Sizes and types listed does not contain all . Other sizes and types are available.

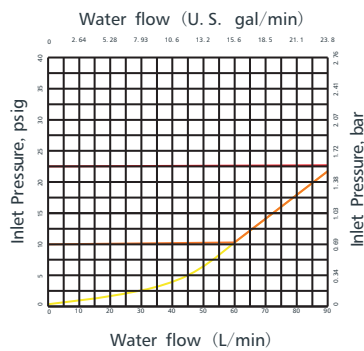
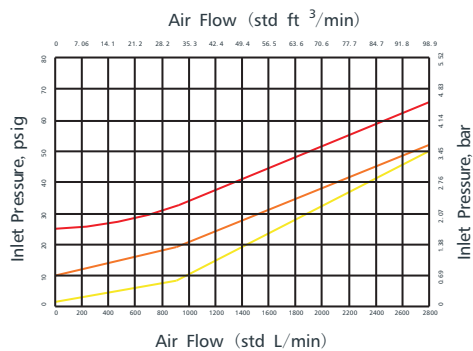
Flow Data at 70°F(20 °C)



- Cv = 0.16
Cracking Pressure = 1 psig
- Cv = 0.16
Cracking Pressure = 10 psig
- Cv = 0.16
Cracking Pressure = 25 psig
- Cv = 0.47
Cracking Pressure = 1 psig
- Cv = 0.47
Cracking Pressure = 10 psig
- Cv = 0.47
Cracking Pressure = 25 psig



- Cv = 1.47
Cracking Pressure = 1 psig
- Cv = 1.47
Cracking Pressure = 10 psig
- Cv = 1.47
Cracking Pressure = 25 psig
- Cv = 1.68
Cracking Pressure = 1 psig
- Cv = 1.68
Cracking Pressure = 10 psig
- Cv = 1.68
Cracking Pressure = 25 psig



- Cv = 4.48
Cracking Pressure = 1 psig
- Cv = 4.48
Cracking Pressure = 10 psig
- Cv = 4.48
Cracking Pressure = 25 psig

How to Order

CV1 — F8 — M10 — N — 1 — 316

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Body Material
CV1	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size		V Fluorocarbon FKM	1 1 psig	316 316 S.S.
	NPT Male NPT	4 1/4 in.				2 1/3 psig	316L 316L S.S.
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator		B Buna N E Ethylene propylene N Neoprene Z Kalrez	3 3 psig	304 304 S.S.
	MBT Male BSPT	8 1/2 in. or 8 mm				10 10 psig	304L 304L S.S.
	FMS Female ISO 261	10 10 mm				25 25 psig	A400 Alloy 400
	MS Male ISO 261	12 3/4 in. or 12 mm					A20 Alloy 20
	FBP Female BSPP	14 14 mm					A600 Alloy 600
	MBP Male BSPP	16 1 in. or 16 mm					A825 Alloy 825
	F Fractional Tube Fitting	18 18 mm					A276 Alloy C276
	M Metric Tube Fitting	20 1 1/4 in. or 20 mm					DU7 Duplex 2507
	UGF Nut + Gasket+ Fractional Bulge Nipple	22 22 mm					BR Brass
	UGM Nut + Gasket+ Metric Bulge Nipple	25 25 mm					

Check Valves

CV2 Series



- ❖ Maximum working pressure up to 6000 psig (413 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ With bonded elastomer seal structure design
- ❖ Liquid or gas service
- ❖ Cracking pressure: 1/3, 1, 3, 10, and 25 psig (0.03, 0.07, 0.21, 0.69, and 1.7 bar)

Features

- ❖ Maximum working pressure up to 6000 psig (413 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ With bonded elastomer seal structure design
- ❖ Liquid or gas service
- ❖ Cracking pressure: 1/3, 1, 3, 10, and 25 psig (0.03, 0.07, 0.21, 0.69, and 1.7 bar)
- ❖ Variety of end connections and materials available

Cracking Pressure and Resealing Pressure

Series	Nominal Cracking Pressure psig (bar)	Cracking Pressure Range psig (bar)
CV2	1/3 (0.02)	0 to 3 (0 to 0.21)
	1 (0.06)	0 to 4 (0 to 0.28)
	3 (0.21)	1 to 5 (0.06 to 0.34)
	10 (0.68)	7 to 15 (0.49 to 1.1)
	25 (1.7)	20 to 30 (1.4 to 2.1)

Pressure vs. Temperature

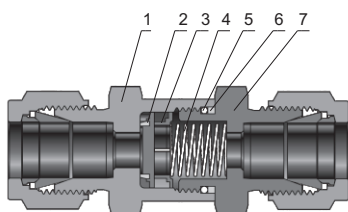
Ratings based on fluorocarbon FKM O-rings in 316 stainless steel valves and Buna N O-rings in brass valves.

Material	316 S.S.	
Temperature, °F(°C)	Working Pressure, psig(bar)	
-10 (-23) to 100 (37)	6000 (413)	5000 (344)
200 (93)	5160 (355)	4290 (295)
250 (121)	4910 (338)	4080 (281)
300 (148)	4660 (321)	3875 (266)
400 (204)	4280 (294)	3560 (245)

Seal Materials

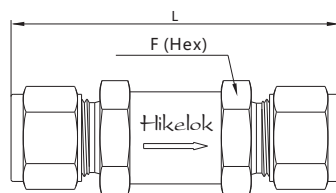
Seal Material	Temperature Range °F (°C)
Buna N	-10 to 250 (-23 to 121)
Ethylene propylene	-50 to 300 (-45 to 148)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Neoprene	-40 to 250 (-40 to 121)

Standard Materials of Construction



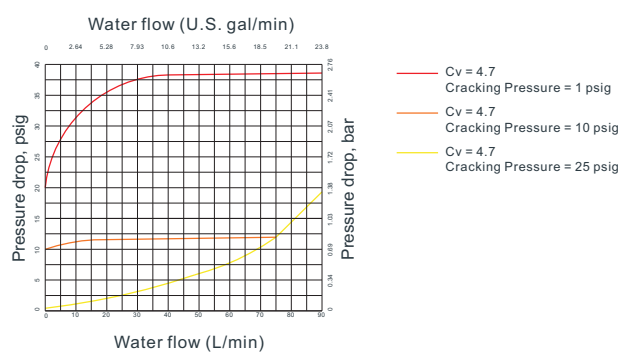
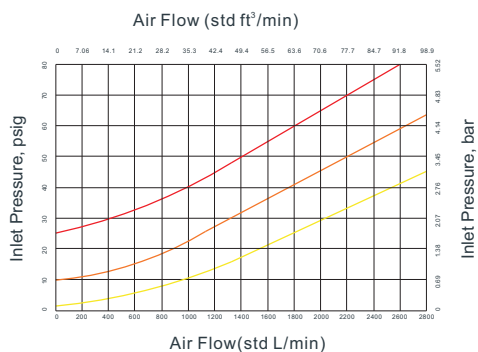
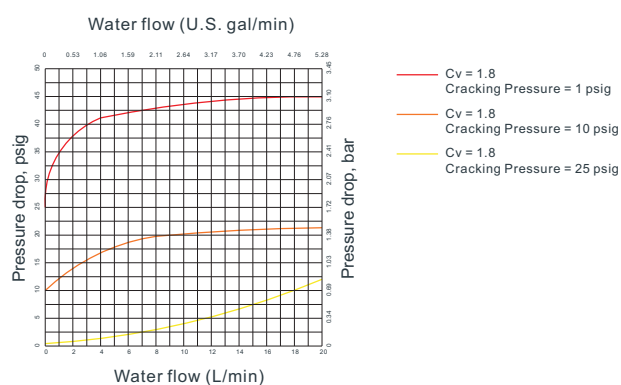
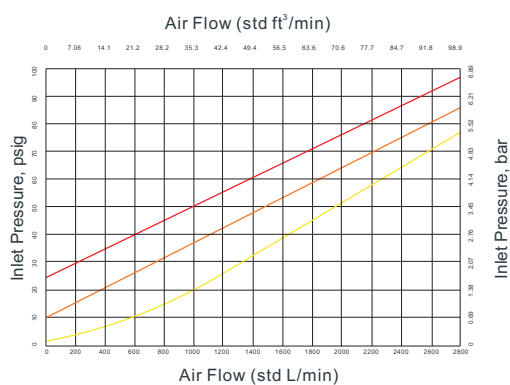
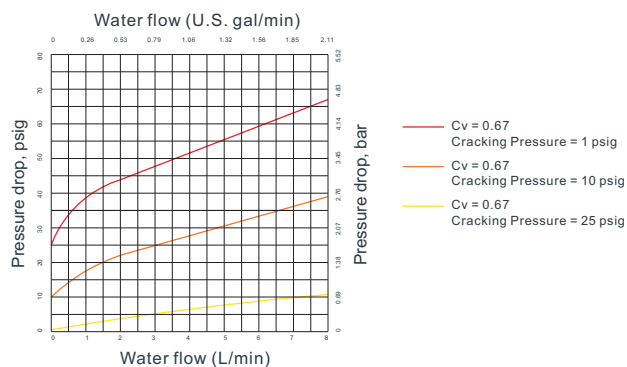
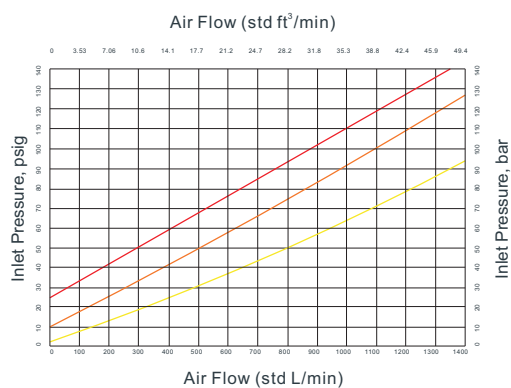
Component	Valve Material Grade/ASTM Specification
1 Inlet Body	316 S.S./A479
2 Poppet	Fluorocarbon FKM - bonded 316 S.S./A479
3 Poppet Stop	316 S.S./A240
4 Spring	302 S.S./A313
5 O-ring	Fluorocarbon FKM
6 Backup Ring	PTFE/D1710
7 Outlet Body	316 S.S./A479

Dimensions



Basic Ordering Number	Connection Type and Size	CV	Dimension, in. (mm)	
			L	F
CV2-F2-	1/8" Hikelok	0.67	2.27 (57.7)	11/16 (17.46)
CV2-F4-	1/4" Hikelok		2.43 (61.7)	
CV2-F6-	3/8" Hikelok	1.8	2.75 (69.9)	1 (25.4)
CV2-F8-	1/2" Hikelok		2.96 (75.2)	
CV2-F12-	3/4" Hikelok	4.7	3.52 (89.4)	1 5/8 (41.28)
CV2-F16-	1" Hikelok		3.88 (98.6)	
CV2-M6-	6 mm Hikelok	0.67	2.43 (61.7)	11/16 (17.46)
CV2-M8-	8 mm Hikelok	1.8	2.70 (68.6)	1 (25.4)
CV2-M10-	10 mm Hikelok		2.80 (71.1)	
CV2-M12-	12 mm Hikelok	4.7	2.96 (75.2)	1 5/8 (41.28)
CV2-M22-	22 mm Hikelok		3.48 (88.4)	
CV2-M25-	25 mm Hikelok	0.67	3.88 (98.6)	11/16 (17.46)
CV2-FNPT4-	1/4 Female NPT		2.13 (54.1)	
CV2-FNPT6-	3/8 Female NPT	1.8	2.55 (64.8)	1 (25.4)
CV2-FNPT8-	1/2 Female NPT		3.03 (77.0)	
CV2-FNPT12-	3/4 Female NPT	4.7	3.23 (82.0)	1 5/8 (41.28)
CV2-FNPT16-	1 Female NPT		3.83 (97.3)	
CV2-NPT2-	1/8 Male NPT	0.67	1.79 (45.4)	11/16 (17.46)
CV2-NPT4-	1/4 Male NPT		2.17 (55.1)	
CV2-NPT6-	3/8 Male NPT	1.8	2.36 (59.9)	1 (25.4)
CV2-NPT8-	1/2 Male NPT		2.73 (69.3)	
CV2-NPT12-	3/4 Male NPT	4.7	3.29 (83.6)	1 5/8 (41.28)
CV2-NPT16-	1 Male NPT		3.67 (93.2)	
CV2-FBT4-	1/4 Female BSPT	0.67	2.28 (57.9)	11/16 (17.46)
CV2-FBT8-	1/2 Female BSPT	1.8	3.29 (83.6)	1 1/16 (26.99)
CV2-FBT12-	3/4 Female BSPT	4.7	3.55 (90.2)	1 5/8 (41.28)
CV2-FBT16-	1 Female BSPT		3.83 (97.3)	
CV2-MBT4-	1/4 Male BSPT	0.67	2.17 (55.1)	11/16 (17.46)
CV2-MBT8-	1/2 Male BSPT	1.8	2.73 (69.3)	1 (25.4)
CV2-MBT12-	3/4 Male BSPT	4.7	3.35 (85.1)	1 5/8 (41.28)
CV2-MBT16-	1 Male BSPT		3.67 (93.2)	

Flow Data at 70 °F(20°C)



How to Order

CV2 — F8 — M10 — N — 1 — 316

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Body Material
CV2	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size		V Fluorocarbon FKM	1 1 psig	316 316 S.S.
	NPT Male NPT	4 1/4 in.			B Buna N	2 1/3 psig	316L 316L S.S.
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator		E Ethylene propylene	3 3 psig	304 304 S.S.
	MBT Male BSPT	8 1/2 in. or 8 mm			N Neoprene	10 10 psig	304L 304L S.S.
	FMS Female ISO 261	10 10 mm				25 25 psig	A400 Alloy 400
	MS Male ISO 261	12 3/4 in. or 12 mm				50 50 psig	A20 Alloy 20
	FBP Female BSPP	14 14 mm					A600 Alloy 600
	MBP Male BSPP	16 1 in. or 16 mm					A825 Alloy 825
	F Fractional Tube Fitting	18 18 mm					A276 Alloy C276
	M Metric Tube Fitting	20 1 1/4 in. or 20 mm					DU7 Duplex 2507
	UGF Nut + Gasket+ Fractional Bulge Nipple	22 22 mm					BR Brass
	UGM Nut + Gasket+ Metric Bulge Nipple	25 25 mm					
	FGFS Female GFS Fitting						
	GFS Male GFS Fitting						
	RGFS Rotatable Male GFS Fitting						

Check Valves

CV3 Series



- ❖ Maximum working pressure up to 6000 psig (413 bar)
- ❖ Working temperature from -65°F to 900°F (-53°C to 482°C)
- ❖ Metal to metal seal structure design
- ❖ Liquid or gas service

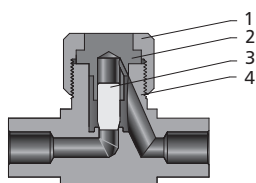
Features

- ❖ Maximum working pressure up to 6000 psig (413 bar)
- ❖ Working temperature from -65°F to 900°F (-53°C to 482°C)
- ❖ Metal to metal seal structure design
- ❖ Reverse flow coefficient less than 0.1% of forward flow coefficient
- ❖ No springs or elastomers
- ❖ Liquid or gas service
- ❖ Variety of end connections and materials

Pressure vs. Temperature

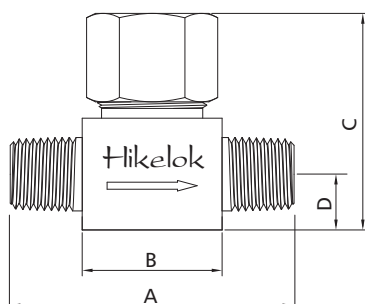
Material	316 S.S.
Temperature, °F (°C)	Working Pressure, psig(bar)
-10 (-23) to 100 (37)	6000 (413)
200 (93)	5160 (355)
250 (121)	4910 (338)
300 (148)	4660 (321)
350 (176)	4470 (307)
400 (204)	4280 (294)
450 (232)	4130 (284)
500 (260)	3980 (274)
600 (315)	3760 (259)
650 (343)	3700 (254)
700 (371)	3600 (248)
750 (398)	3520 (242)
800 (426)	3460 (238)
850 (454)	3380 (232)
900 (482)	3280 (225)

Standard Materials of Construction



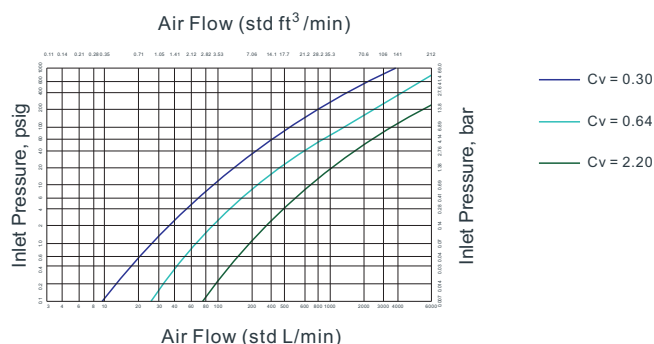
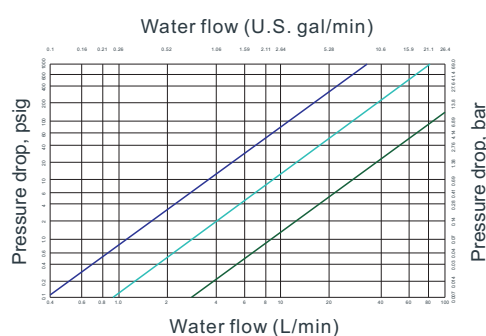
Component	Valve Material Grade/ASTM Specification
1 Bonnet Nut	316 S.S./A479
2 Bonnet	316 S.S./A479
3 Poppet	S17400/A564
4 Body	316 S.S./A479

Dimensions



Basic Ordering Number	Connection Type and Size	Cv	Dimension, in. (mm)			
			A	B	C	D
CV3-F4-	1/4" Hikelok	0.30	2.40 (61.0)	1.01 (25.7)	1.47 (37.3)	0.39 (9.9)
CV3-F6-	3/8" Hikelok	0.64	2.83 (71.9)	1.31 (33.3)	1.85 (47.0)	0.50 (12.7)
CV3-F8-	1/2" Hikelok	2.20	3.92 (99.6)	2.19 (55.6)	2.44 (62.0)	0.62 (15.7)
CV3-F12-	3/4" Hikelok					
CV3-M6-	6 mm Hikelok	0.30	2.40 (61.0)	1.01 (25.7)	1.47 (37.3)	0.39 (9.9)
CV3-FNPT2-	1/8 Female NPT					
CV3-FNPT4-	1/4 Female NPT	0.64	2.25 (57.2)	1.25 (31.8)	1.85 (47.0)	0.50 (12.7)
CV3-FNPT6-	3/8 Female NPT	2.20	3.12 (79.2)	1.86 (47.2)	2.44 (62.0)	0.62 (15.7)
CV3-FNPT8-	1/2 Female NPT					
CV3-FSW4-	1/4" FSW	0.30	1.81 (46.0)	0.9 (22.9)	1.47 (37.3)	0.39 (9.9)
CV3-FSW6-	3/8" FSW	0.64	2.25 (57.2)	1.25 (31.8)	1.85 (47.0)	0.50 (12.7)
CV3-FSW8-	1/2" FSW	2.20	3.13 (79.5)	1.88 (47.8)	2.44 (62.0)	0.62 (15.7)
CV3-FBW4-	1/4" FBW	0.30	1.81 (46.0)	0.9 (22.9)	1.47 (37.3)	0.39 (9.9)
CV3-FBW6-	3/8" FBW	0.64	2.25 (57.2)	1.25 (31.8)	1.85 (47.0)	0.50 (12.7)
CV3-FBW8-	1/2" FBW	2.20	3.13 (79.5)	1.88 (47.8)	2.44 (62.0)	0.62 (15.7)

Flow Data at 70°F (20°C)

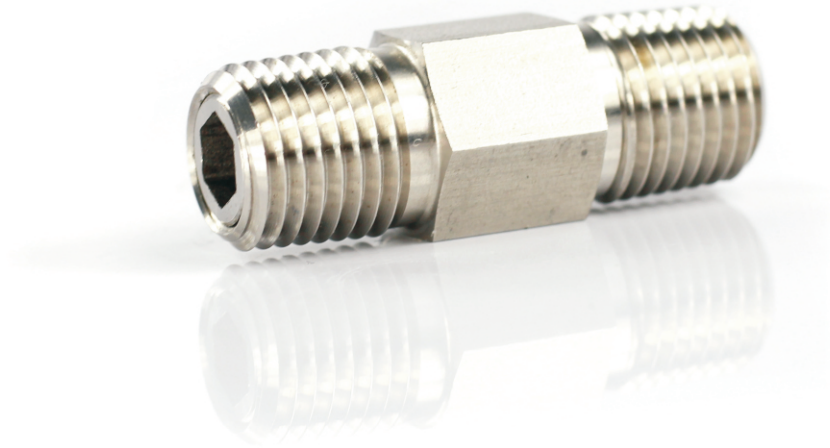


How to Order

CV3—	F8	—	M10	—	316
Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Body Material
CV3	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size		316 316 S.S.
	NPT Male NPT	4 1/4 in.			316L 316L S.S.
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator		304 304 S.S.
	MBT Male BSPT	8 1/2 in. or 8 mm			304L 304L S.S.
	FMS Female ISO 261	10 10 mm			A400 Alloy 400
	MS Male ISO 261	12 3/4 in. or 12 mm			A20 Alloy 20
	FBP Female BSPP	14 14 mm			A600 Alloy 600
	MBP Male BSPP	16 1 in. or 16 mm			A825 Alloy 825
	MSW Metric Tube Socket Weld	18 18 mm			A276 Alloy C276
	FBW Fractional Tube Butt Weld	20 1 1/4 in. or 20 mm			DU7 Duplex 2507
	MBW Metric Tube Butt Weld	22 22 mm			CS Steel
	PSW Pipe Socket Weld	25 25 mm			
	PBW Pipe Butt Weld				
	F Fractional Tube Fitting				
	M Metric Tube Fitting				
	UGF Nut + Gasket+ Fractional Bulge Nipple				
	UGM Nut + Gasket+ Metric Bulge Nipple				

One-Piece Body Check Valves

CV4 Series



- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ One-piece body design
- ❖ Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- ❖ 316 stainless steel, brass and alloy 400 body material

Features

- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ One-piece body design
- ❖ Fully contained O-ring seal
- ❖ Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- ❖ 316 stainless steel, brass and alloy body material
- ❖ Variety of end connections

Cracking Pressure

Series	Nominal Cracking Pressure psig (bar)	Cracking Pressure Range psig (bar)
CV4	1/3 (0.03)	0 to 3 (0 to 0.21)
	1 (0.07)	0 to 4 (0 to 0.28)
	10 (0.69)	7 to 13 (0.49 to 0.90)
	25 (1.7)	21 to 29 (1.5 to 2.0)

Pressure-Temperature Ratings

Ratings based on fluorocarbon FKM O-rings in 316 stainless steel valves and Buna N O-rings in brass valves.

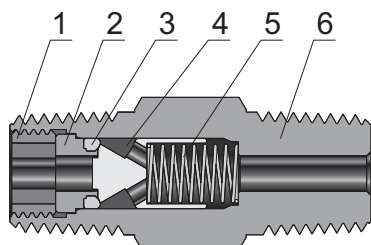
Material	316 S.S.	Brass
Temperature °F (°C)	Working Pressure, psig (bar)	
-10 (-23) to 100 (37)	3000 (206)	3000 (206)
200 (93)	2575 (177)	2600 (179)
250 (121)	2450 (168)	2405 (165)
300 (148)	2325 (160)	—
400 (204)	2185 (150)	—

Seal Materials

Seal Material	Temperature Range °F (°C)
Buna N	-10 to 250 (-23 to 121)
Ethylene propylene	-50 to 300 (-45 to 148)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Neoprene	-40 to 250 (-40 to 121)

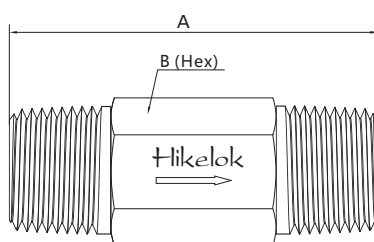
Standard Materials of Construction

CO Series



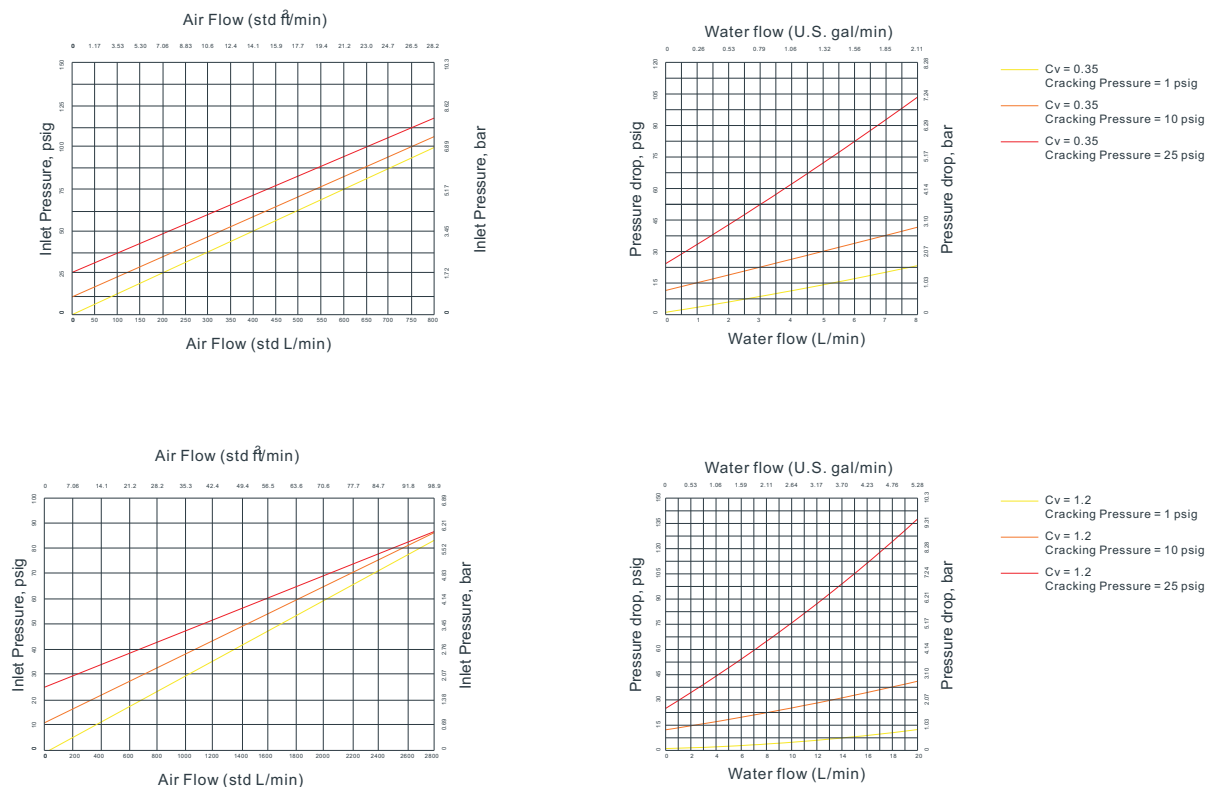
Component	Valve Material Grade/ASTM Specification	
	316 S.S.	Brass
1 Insert Locking Screw	316 S.S./A276 or A479	Brass C36000/B16
2 Insert	316 S.S./A479	Brass C36000/B16
3 O-ring	Fluorocarbon FKM	Buna N
4 Poppet	316 S.S./A479	Brass C36000/B16
5 Spring	302 S.S./A313	
6 Body	316 S.S./A479	Brass C36000/B16

Dimensions



Basic Ordering Number	Connection Type and Size	Cv	Dimension, in. (mm)	
			A	B
CV4-FNPT4-	1/4 Female NPT	0.35	2.41 (61.2)	3/4 (19.05)
CV4-FNPT8-	1/2 Female NPT	1.20	3.71 (94.2)	1 1/16 (26.99)
CV4-NPT4-	1/4 Male NPT	0.35	1.62 (41.1)	9/16 (14.29)
CV4-NPT8-	1/2 Male NPT	1.20	2.28 (57.9)	7/8 (22.23)
CV4-FBT4-	1/4 Female BSPT	0.35	2.54 (64.5)	3/4 (19.05)
CV4-MBT4-	1/4 Male BSPT	0.35	1.62 (41.1)	9/16 (14.29)

Flow Data at 70 °F(20 °C)



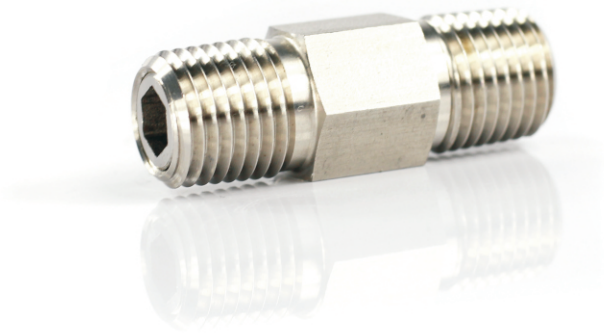
How to Order

CV4— NPT8 — MBT8 — V — 1 — 316

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Body Material
CV4	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size		V Fluorocarbon FKM	1 1 psig	316 316 S.S.
	NPT Male NPT	4 1/4 in.			B Buna N	2 1/3 psig	316L 316L S.S.
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator		E Ethylene propylene	3 3 psig	304 304 S.S.
	MBT Male BSPT	8 1/2 in. or 8 mm			N Neoprene	10 10 psig	304L 304L S.S.
	FMS Female ISO 261				Z Kalrez	25 25 psig	A400 Alloy 400
	MS Male ISO 261						A20 Alloy 20
	FBP Female BSPP						A600 Alloy 600
	MBP Male BSPP						A825 Alloy 825
							A276 Alloy C276
							DU7 Duplex 2507
							BR Brass

One-Piece Body, Adjustable cracking pressure **Check Valves**

CV5 Series



- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ One-piece body design
- ❖ Adjustable spring sets cracking pressure
- ❖ Cracking pressure: 3 to 600 psig (0.21 to 41.3 bar)
- ❖ 316 stainless steel, brass and alloy 400 body material

Features

- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ One-piece body design
- ❖ Fully contained O-ring seal
- ❖ Adjustable spring sets cracking pressure
- ❖ Locking screw maintains setting
- ❖ Cracking pressure: 3 to 600 psig (0.21 to 41.3 bar)
- ❖ 316 stainless steel, brass and alloy body material
- ❖ Variety of end connections

Cracking Pressure

Series	Nominal Cracking Pressure psig (bar)
CV5	3 to 50 (0.21 to 3.50)
	50 to 150 (3.50 to 10.4)
	150 to 350 (10.4 to 24.2)
	350 to 600 (2.40 to 41.4)

Pressure-Temperature Ratings

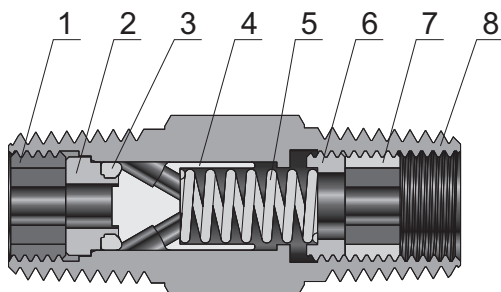
Ratings based on fluorocarbon FKM O-rings in 316 stainless steel valves and Buna N O-rings in brass valves.

Material	316S.S.	Brass
Temperature °F (°C)	Working Pressure, psig (bar)	
-10 (-23) to 100 (37)	3000 (206)	3000 (206)
200 (93)	2575 (177)	2600 (179)
250 (121)	2450 (168)	2405 (165)
300 (148)	2325 (160)	—
400 (204)	2185 (150)	—

Seal Materials

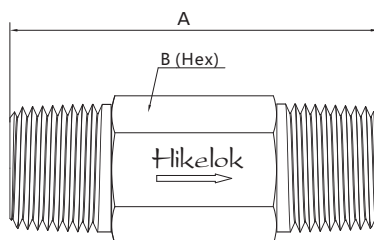
Seal Material	Temperature Range °F (°C)
Buna N	-10 to 250 (-23 to 121)
Ethylene propylene	-50 to 300 (-45 to 148)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Neoprene	-40 to 250 (-40 to 121)

Standard Materials of Construction



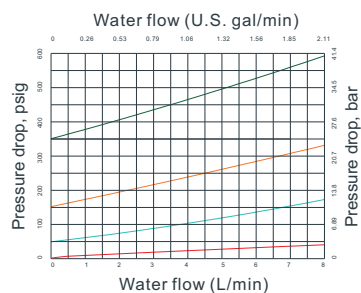
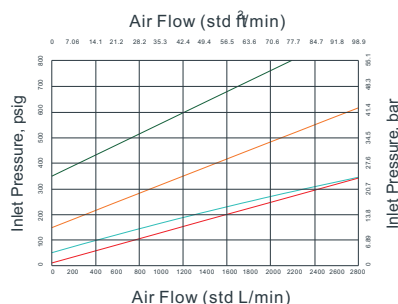
Component	Valve Material Grade/ASTM Specification	
	316 S.S.	Brass
1 Insert Locking Screw	316 S.S./A479	Brass C36000/B16
2 Insert	316 S.S./A479	Brass C36000/B16
3 O-ring	Fluorocarbon FKM	Buna N
4 Poppet	316 S.S./A479	Brass C36000/B16
5 Spring	302 S.S./A313	
6 Adjusting Screw	316 S.S./A276	
7 Locking Screw	316 S.S./A276	
8 Body	316 S.S./A479	Brass C36000/B16

Dimensions

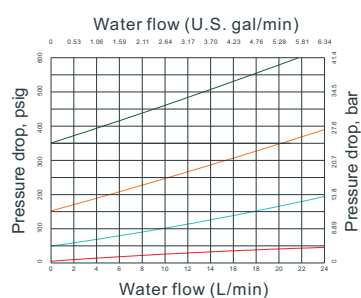
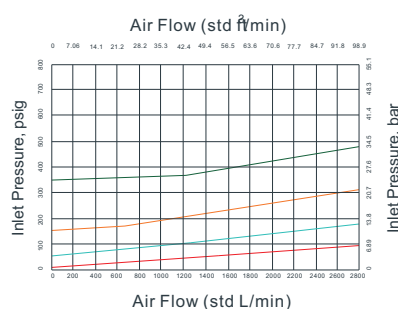


Basic Ordering Number	Connection Type and Size	Cv	Dimension, in. (mm)	
			A	B
CV5-FNPT4-	1/4 Female NPT	0.35	2.98 (75.7)	3/4 (19.05)
CV5-NPT4-	1/4 Male NPT	0.35	1.62 (41.1)	9/16 (14.29)
CV5-NPT8-	1/2 Male NPT	1.20	2.56 (65.0)	7/8 (22.23)
CV5-MBT4-	1/4 Male BSPT	0.35	1.62 (41.1)	9/16 (14.29)
CV5-MBT8-	1/2 Male BSPT	1.20	2.56 (65.0)	7/8 (22.23)

Flow Data at 70 °F (20 °C)



- Cv = 0.35
Cracking Pressure = 3 psig
- Cv = 0.35
Cracking Pressure = 50 psig
- Cv = 0.35
Cracking Pressure = 150 psig
- Cv = 0.35
Cracking Pressure = 350 psig



- Cv = 1.2
Cracking Pressure = 3 psig
- Cv = 1.2
Cracking Pressure = 50 psig
- Cv = 1.2
Cracking Pressure = 150 psig
- Cv = 1.2
Cracking Pressure = 350 psig

How to Order

CV5 — NPT8 — MBT8 — V — 50 — 316

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Body Material
CV5	FNPT Female NPT	2 1/8 in.	Same as inlet type and inlet size		V Fluorocarbon FKM	50 3 to 50 psig	316 316 S.S.
	NPT Male NPT	4 1/4 in.			B Buna N	150 50 to 150 psig	316L 316L S.S.
	FBT Female BSPT	6 3/8 in. or 6 mm	If outlet and inlet are the same, eliminate the outlet designator		E Ethylene propylene	350 150 to 350 psig	304 304 S.S.
	MBT Male BSPT	8 1/2 in. or 8 mm			N Neoprene	600 350 to 600 psig	304L 304L S.S.
	FMS Female ISO 261				Z Kalrez		A400 Alloy 400
	MS Male ISO 261						A20 Alloy 20
	FBP Female BSPP						A600 Alloy 600
	MBP Male BSPP						A825 Alloy 825
							A276 Alloy C276
							DU7 Duplex 2507
							BR Brass

Adjustable cracking pressure Check Valves

CV6 Series



- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ Adjustable spring sets cracking pressure
- ❖ Cracking pressure: 3 to 600 psig (0.21 to 41.3 bar)
- ❖ 316 stainless steel, brass and alloy 400 body material

Features

- ❖ Maximum working pressure up to 3000 psig (206 bar)
- ❖ Working temperature from -10°F to 400°F (-23°C to 204°C)
- ❖ Fully contained O-ring seal
- ❖ Adjustable spring sets cracking pressure
- ❖ Locking screw maintains setting
- ❖ Cracking pressure: 3 to 600 psig (0.21 to 41.3 bar)
- ❖ 316 stainless steel, brass and alloy body material
- ❖ Variety of end connections

Cracking Pressure

Series	Nominal Cracking Pressure psig (bar)
CV6	3 to 50 (0.21 to 3.50)
	50 to 150 (3.50 to 10.4)
	150 to 350 (10.4 to 24.2)
	350 to 600 (2.40 to 41.4)

Pressure-Temperature Ratings

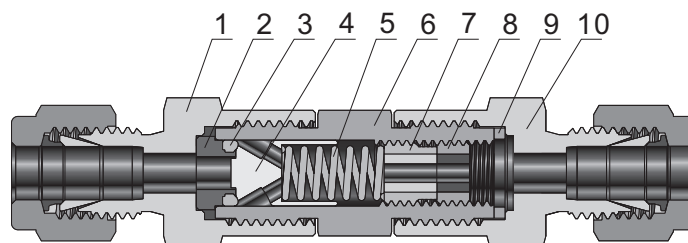
Ratings based on fluorocarbon FKM O-rings in 316 stainless steel valves and Buna N O-rings in brass valves.

Material	316 S.S.	Brass
Temperature °F (°C)	Working Pressure, psig (bar)	
-10 (-23) to 100 (37)	3000 (206)	3000 (206)
200 (93)	2575 (177)	2600 (179)
250 (121)	2450 (168)	2405 (165)
300 (148)	2325 (160)	—
375 (190)	2185 (150)	—

Seal Materials

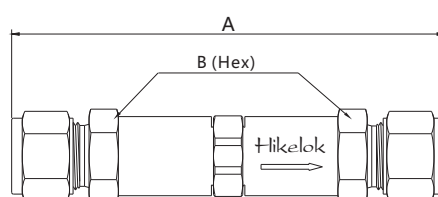
Seal Material	Temperature Range °F (°C)
Buna N	-10 to 250 (-23 to 121)
Ethylene propylene	-50 to 300 (-45 to 148)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Neoprene	-40 to 250 (-40 to 121)

Standard Materials of Construction



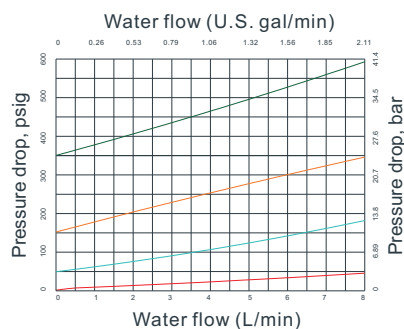
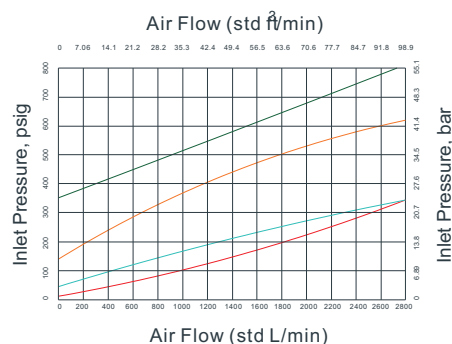
Component	Valve Material Grade/ASTM Specification	
	316 S.S.	Brass
1 Inlet Body	316 S.S./A479	Brass C36000/B16
2 Insert	316 S.S./A479	Brass C36000/B16
3 O-ring	Fluorocarbon FKM	Buna N
4 Poppet	316 S.S./A479	Brass C36000/B16
5 Spring	302 S.S./A313	
6 Center Body	316 S.S./A479	Brass C36000/B16
7 Adjusting Screw	316 S.S./A276	
8 Locking Screw	316 S.S./A276	
9 Gasket	PTFE-coated 316 S.S./A276	
10 Outlet Body	316 S.S./A479	Brass C36000/B16

Dimensions



Basic Ordering Number	Connection Type and Size	CV	Dimension, in. (mm)	
			A	B
CV6-F4-	1/4" Hikelok	0.37	3.23 (82.0)	5/8 (15.88)
CV6-M6-	6 mm Hikelok			
CV6-M8-	8 mm Hikelok		3.32 (84.3)	
CV6-GFS4-	1/4" Male GFS		3.09 (78.5)	

Flow Data at 70 °F(20 °C)



- Cv = 0.37
Cracking Pressure = 3 psig
- Cv = 0.37
Cracking Pressure = 50 psig
- Cv = 0.37
Cracking Pressure = 150 psig
- Cv = 0.37
Cracking Pressure = 350 psig

How to Order

CV6 — F4 — M6 — V — 50 — 316

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Body Material
CV6	F Fractional Tube Fitting	2 1/8 in.	Same as inlet type and inlet size If outlet and inlet are the same, eliminate the outlet designator		V Fluorocarbon FKM B Buna N E Ethylene propylene N Neoprene Z Kalrez	50 3 to 50 psig	316 316 S.S.
	M Metric Tube Fitting	4 1/4 in.				150 50 to 150 psig	316L 316L S.S.
	GFS Male GFS Fitting	6 3/8 in. or 6 mm				350 150 to 350 psig	304 304 S.S.
		8 1/2 in. or 8 mm				600 350 to 600 psig	304L 304L S.S.
							A400 Alloy 400
							A20 Alloy 20
							A600 Alloy 600
							A825 Alloy 825
							A276 Alloy C276
							DU7 Duplex 2507
							BR Brass